AF/GP 2673

Docket No.: YHK-0065 PATENT

Oral Hearing 7-20-04 NP

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS AND INTERFERENCES

In re Application of	:	
Seong Cheol SHIN	:	
Serial No.: 09/836,204	:	Group Art Unit: 2673
Confirm. No.: 6497	:	Examiner: Lun Yi Lao
Filed: April 18, 2001	:	Customer No.: 34610

For: METHOD AND APPARATUS FOR DRIVING PLASMA DISPLAY PANEL UTILIZING ASYMMETRY SUSTAINING

TRANSMITTAL OF REPLY BRIEF AND REQUEST FOR ORAL HEARING

U.S. Patent and Trademark Office
220 20th Street S.
Customer Window, Mail Stop Appeal Brief-Patents
Crystal Plaza Two, Lobby, Room 1B03
Arlington, VA 22202

Sir:

Submitted herewith in triplicate is Appellants Reply Brief responding to the Examiner's Answer dated May 5, 2004. Applicant hereby request an oral hearing before the Board of Patent Appeals and Interferences in the appeal of the above-identified application. Enclosed is Check No 12317 for the Request for Oral Hearing of $290.00.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
FLESHNER & KIM, LLP

Daniel Y.J. Kim
Registration No. 36,186
David C. Oren
Registration No. 38,694

P.O. Box 221200
Chantilly, Virginia 20153-1200
703 766-3701 DYK:DCO/kah

Date: July 6, 2004

Please direct all correspondence to Customer Number 34610

16 Reply Brief 7-20-04 NP

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REPLY BRIEF

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Sir:

In response to the Examiner's Answer dated May 5, 2004, applicant is providing the following reply to the issues raised in the Examiner's Answer. This Reply Brief is filed in accordance with 37 C.F.R. §1.193(b)(1).

Applicant respectfully maintains all previous arguments with respect to this application. Claims 1-12 remain pending in this application. The outstanding final rejection rejects claims 1-12 under 35 U.S.C. §103(a) over U.S. Patent 5,995,069 to Tokunaga et al. (hereafter Tokunaga) in view of U.S. Patent 6,229,516 to Kim et al. (hereafter Kim). The rejection is respectfully traversed.

As stated in the Appeal Brief and as agreed upon in the Examiner's Answer, Kim relates to a driving technique of liquid crystal display (LCD) panel. The Examiner's Answer asserts (on page 5, lines 5-6) that "if an asymmetry drive method could be applied in data driver of an LCD display, so does in a plasma display." That statement appears to assert that because Kim provides an asymmetric method for an LCD and LCDs are representative of flat panel displays, then the asymmetric LCD driving method may be applied to plasma displays. Applicant respectfully disagrees with this logic.

Merely because a plasma display may be considered a similar type of display as another type of display, there is no suggestion that they will be driven in a similar manner. For example, the technology of an LCD display and a plasma display are quite different. Applicant has set forth details (beginning on page 7, second to the last line to page 9, line 2 of the Appeal Brief) in which different types of driving methods are described for both a plasma display and a liquid crystal display. That is, plasma displays may utilize reset pulses, scanning pulses, sustaining pulses, priming pulses, and erasing pulses. These pulses may be utilized in order to excite fluorescent material by a ultraviolet ray generated upon plasma discharge to produce a red, green or blue color visible light ray. An inactive gas for a gas discharge may be injected into a discharge space between upper/lower substrates and a barrier rib. See, for example, page 2, lines 18-24 of the present application. Furthermore, a plasma display may require a voltage of more than hundreds of volts. See, for example, page 4, lines 28-30 of the present application. An LCD does not utilize such a type of driving technique or voltage in order to turn on/off a switching element and turn a pixel electrode into an on state. See Kim's col. 4, line 59-col. 5, line 15. While the present application and Kim may both relate to displays, there is no

suggestion merely that they may utilize similar driving techniques. There also is no suggestion that different techniques may be taken from Kim and applied to plasma display technology.

The Office Action (and the Examiner's Answer) clearly has taken a feature of Kim's LCD and applied it to plasma display technology in order to find features of the claims. Merely because Kim's Figure 9 shows upward data provided at different times than lower data due to start signals STV1 and STV2, there is no suggestion of how this may be applied to plasma display technology such as technology that may include, for example, reset pulses, priming pulses, scanning pulses, sustaining pulses and erasing pulses. For at least these reasons, applicant maintains that there is no suggestion to combine Tokunaga and Kim as set forth in the Examiner's Answer and the previous Office Actions.

The Examiner's Answer states (on page 5, beginning on line 10) that Tokunaga teaches first and second address drivers or energy recovery circuits (Figure 11) and that Kim teaches first and second data drivers or energy recovery circuits having phase differences. However, applicant has reviewed both Tokunaga and Kim and has found no explicit disclosure regarding energy recovery circuits. That is, while the present application describes that energy recovery circuits may be associated with the address drivers, there is no explicit suggestion in Tokunaga or Kim of any type of energy recovery circuit. Therefore, merely because Tokunaga teaches first and second address drivers and Kim teaches first and second data drivers, there is no teaching for the claimed energy recovery circuit. Even further, there is no suggestion for driving an energy recovery circuit at the application time of the driving signals to raise the driving signals into a stable voltage level and driving the energy recovery circuit after the data was supplied to the corresponding block, thereby falling the driving signals into a ground voltage level, as recited

in dependent claim 7. Furthermore, there is no suggestion for signals for driving the energy recovery circuit have a phase difference between the upper block and the lower block, as recited in dependent claim 8. Merely because Tokunaga and Kim disclose address drivers, this does not teach or suggest the features relating to the energy recovery circuit as recited in each of dependent claims 7 and 8. The rejection of these claims should be withdrawn at least for these reasons.

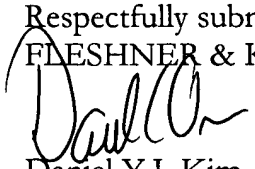
The Examiner's Answer states (on page 5, last paragraph) that Kim teaches that the lower driving signal (down A or down B) is applied at an approximately halftime of an application period of the upper driving signal (up A or up B) on an LCD display. The Examiner's Answer further states that these driving signals may be similarly applied to a plasma display, since a plasma display and an LCD are both dot matrix displays. However, for at least the reasons set forth above, the driving technology of Kim does not relate to the driving technology of a plasma display panel such as Tokunaga. Therefore, the suggestion in the Examiner's Answer is incorrect because the driving techniques of these different types of displays are different. Furthermore, applicant respectfully submits that Kim merely discloses that the upper data may be output at an arbitrary time. See column 8, line 8. Thus, Kim does not disclose the alleged features. Accordingly, there is no suggestion that the lower driving signal is applied at an approximately halftime of an application period of the upper driving signal as recited in dependent claim 2. For similar reasons, there is no suggestion that the delay delays the second control signal such that a driving signal can be applied from the second address driver to the address electrode lines at an approximately half time of a driving signal applied from the first

address driver to the address electrode lines, as recited in dependent claim 11. The rejection of claims 2 and 11 should be withdrawn at least for this additional reason.

The Examiner's Answer (on page 6, lines 6-16) states that Kim's Figures 9 and 12 teaches (in Figures 9 and 12) a period when the upper driving signal falls into a ground potential overlaps with a period when the lower driving signal remains at a stable voltage level and a period when the lower driving signal falls into a ground potential overlaps with a period when the upper driving signal remains at a stable voltage level. However, there is no discussion or suggestion in Kim's Figures 9 or 12 of a stable voltage level. Rather, these figures merely show that upper data and lower data may be supplied at different times. For at least these reasons, each of dependent claims 3-7 define patentable subject matter for at least this additional reason.

For at least the reasons set forth above and for at least the reason set forth in the Appeal Brief (as well as the previous responses), applicant maintains that each of claims 1-12 define patentable subject matter. Applicant respectfully requests that the rejection of claims 1-12 be withdrawn.

Respectfully submitted,
FLESHNER & KIM, LLP



Daniel Y.J. Kim
Registration No. 36,186
David C. Oren
Registration No. 38,694

P.O. Box 221200
Chantilly, Virginia 20153-1200
703 766-3701 DYK:DCO/kah
Date: July 6, 2004